

I. GENERAL PROJECT DESCRIPTION

THE PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT MD 97 (GEORGIA AVE) AND I-495 INTERCHANGE. THE MODIFICATION INVOLVES THE INSTALLATION OF UPS SIGNAL EQUIPMENT IN A NEW NEMA SIZE "S" BASE MOUNTED CABINET ON THE EXISTING CABINET FOUNDATION. ALL EXISTING PEDESTRIAN SIGNALS WILL BE UPGRADED TO ACCESSIBLE PEDESTRIAN SIGNALS AND LED COUNTDOWN PEDESTRIAN SIGNAL HEADS. ALL EXISTING SIGNAL HEADS WILL BE UPGRADED TO LED SIGNAL HEADS. ALL EXISTING CURB RAMPS WILL BE UPGRADED TO CURRENT ADA STANDARDS. ALL EXISTING LOOP DETECTORS WILL BE REPLACED WITH MICROLOOP PROBES. MD 97 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION SHALL CONTINUE TO OPERATE IN A NEMA FOUR-PHASE, FULLY-ACTUATED MODE, WITH THE MD 97 (GEORGIA AVE) APPROACHES RUNNING CONCURRENTLY. I-495 INTERCHANGE WILL CONTINUE TO OPERATE IN CONCURRENTLY FOR THE WESTBOUND APPROACHES.

III. CONTROLLER REQUIREMENTS

A NEMA EIGHT-PHASE, FULL-ACTUATED CONTROLLER WITH VIDEO DETECTOR INTERFACE UNIT, 2-WIRE CENTRAL CONTROL UNIT, AND ALL OTHER NECESSARY. EQUIPMENT HOUSED IN A NEMA SIZE "S" BASE-MOUNTED CABINET SHALL BE INSTALLED AT THE INTERSECTION.

IV. SPECIAL NOTES:

1. APS WILL FUNCTION AS FOLLOWS:

- TO CROSS MD 97 (GEORGIA AVE)
- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS GEORGIA AT CAPITAL BELTWAY RAMP, WAIT."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

- TO CROSS I-495 INTERCHANGE
- A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS CAPITAL BELTWAY RAMP AT GEORGIA, WAIT."
- B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERING THE SIGNAL CABINET VIDEO INTERFACE EQUIPMENT TO THE MONTGOMERY COUNTY SIGNAL SHOP. THE CONTRACTOR SHALL DELIVER APS PUSHBUTTONS AND CENTRAL CONTROL UNIT TO MR. ROBERT RICKETTS AT MONTGOMERY COUNTY TECHNICAL CENTER AT 1283 SEVEN LOCKS ROAD, ROCKVILLE, MD 20854 AT LEAST 3 WEEKS PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL HAVE THE APS MESSAGES PROGRAMMED FROM THE FACTORY AND DELIVER THE APS WAVE FILES TO MR. ROBERT RICKETTS.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

CATEGORY CODE	QTY	UNITS	DESCRIPTION
900000	1	EA	CONTROLLER CABINET, SIZE "S" W/CTRL (VIDEO INT. 1-8 CAM)
900000	1	EA	UPS EQUIPMENT FOR "S" CABINET
900000	1	EA	CABINET EXTENSION BASE, SIZE "S"
900000	4	SF	SHEET ALUMINUM MAST ARM / POLE MOUNTED SIGN
900000	96	SF	SHEET ALUMINUM GROUND MOUNTED SIGN
			2 EA - R1-2 (36 IN. X 36 IN. X 36 IN.)
			1 EA - W4-3(1) (30 IN. X 30 IN.)
			6 EA - W11-2a (36 IN. X 36 IN.)
			3 EA - W16-7p(L) (24 IN. X 12 IN.)
			3 EA - W16-7p(R) (24 IN. X 12 IN.)
			1 EA - R4-7 (24 IN. X 30 IN.)

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

CATEGORY CODE	QTY	UNITS	DESCRIPTION
100000	1	EA	MAINTENANCE OF TRAFFIC (PER INTERSECTION)
201032	8	CY	CLASS 2 EXCAVATION
203030	4	CY	TEST PIT EXCAVATION
504150	1	TON	HOT MIX ASPHALT SUPERPAVE 9.5 MM FOR SURFACE, PG76-22, LEVEL - 3
520109	15	SY	3 INCH GRADED AGGREGATE BASE COURSE
585621	595	LF	12 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585625	130	LF	24 INCH WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
585700	750	LF	REMOVAL OF EXISTING PAVEMENT MARKING LINES, ANY WIDTH
600000	185	LF	TYPE A COMBINATION CURB AND GUTTER ANY HEIGHT OR DEPTH
600000	230	LF	TYPE A CURB ANY HEIGHT OR DEPTH
655105	960	SF	5 INCH CONCRETE SIDEWALK
655120	65	SF	DETECTABLE WARNING SURFACE FOR CURB RAMPS
704345	140	SY	PLACING FURNISHED TOPSOIL 4 INCH DEPTH
708220	70	SY	TURFGRASS SOD ESTABLISHMENT
800000	1	EA	THIRD PARTY CONCRETE TESTING (PER INTERSECTION)
800000	1	EA	2 WIRE APS CENTRAL CONTROL UNIT
800000	4	EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON STATION AND SIGNS
800000	4	EA	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	4	EA	5 FOOT OR 10 FOOT PEDESTAL POLE WITH BREAKAWAY COUPLINGS, FOUNDATION & GROUND ROD
800000	1	EA	REMOVE & DISPOSE OF EXISTING SIGNAL EQUIPMENT (PER SIGNALIZED INTERSECTION LOCATION)
800000	1	EA	INSTALL CONTROLLER AND CABINET BASE MOUNT (ANY SIZE) INCLUDING F&I FOUNDATION & GROUND ROD
800000	85	LF	UP TO 4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
800000	100	SF	INSTALL OVERHEAD OR GROUND MOUNTED SIGN (INCLUDING ALL HARDWARE)
800000	1	EA	100 AMP EMBEDDED METERED SERVICE PEDESTAL, CONCRETE COLLAR & GROUND RODS
800000	130	LF	WOOD SIGN SUPPORTS UP TO 4 INCH X 6 INCH
801130	1	EA	SQUARE PERFORATED TUBULAR STEEL SIGN POSTS
801135	1	EA	SQUARE TUBULAR STEEL ANCHOR BASES
802501	65	LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
810022	85	LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 8 AWG-THHN/THWN
860284	33	EA	12 INCH LED VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861105	270	LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)
861106	290	LF	ELECTRICAL CABLE - 3 CONDUCTOR (NO. 14 AWG)
861107	290	LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)

C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)
PHASE 2 & 6	G	G	G	G	G	G	G	G	R	R	R	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	Y	Y	R	R	R	DW	DW	DW	DW
PHASE 2 & 6 CLEAR	R	R	R	G	G	G	G	G	R	R	R	WK	WK	DW	DW
PED CLEAR / COUNTDOWN	R	R	R	G	G	G	G	G	R	R	R	FL/DW	FL/DW	DW	DW
2 & 6 CLEAR CHANGE	R	R	R	Y	Y	Y	Y	Y	R	R	R	DW	DW	DW	DW
PHASE 4	R	R	R	R	R	R	R	R	G	G	G	DW	DW	DW	DW
4 CHANGE	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	R	R	R	R	G	G	G	DW	DW	WK	WK
PED CLEAR / COUNTDOWN	R	R	R	R	R	R	R	R	G	G	G	DW	DW	FL/DW	FL/DW
4 ALT CHANGE	R	R	R	R	R	R	R	R	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

UTILITY CONTACT

PEPCO
PAUL WILSON
(301)548-4332
201 W GUDE DRIVE
ROCKVILLE, MD 20850-0850

MONTGOMERY COUNTY DOT

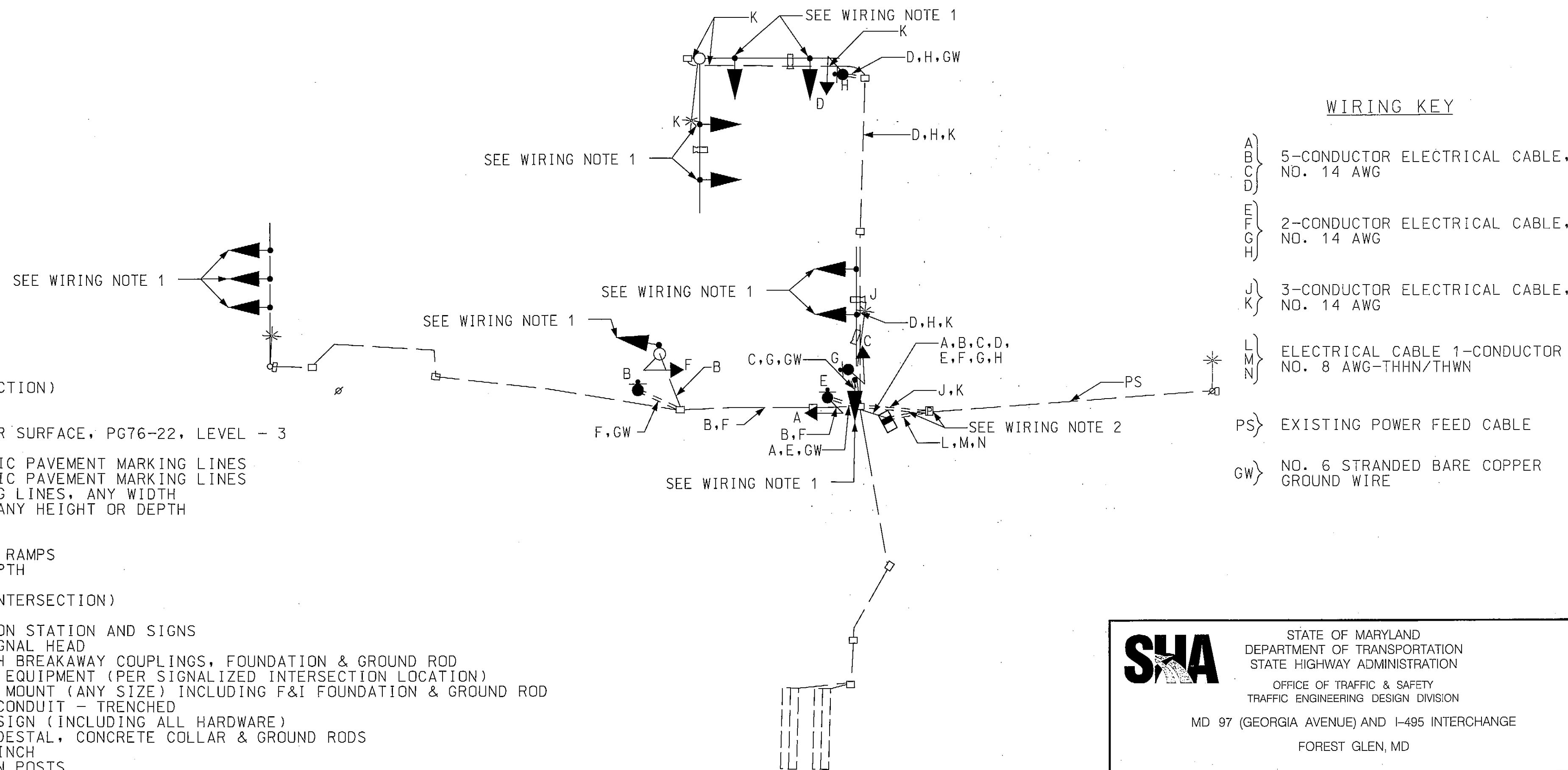
MR. KAMAL HAMUD
TRAFFIC ENGINEER
240-777-8761

MR. ROBERT RICKETTS
SIGNAL SHOP
301-279-1291

WIRING NOTES:

- DISCONNECT EXISTING ELECTRICAL CABLE FROM EXISTING SIGNAL HEADS TO BE REMOVED AND RE-CONNECT TO PROPOSED SIGNAL HEADS. ANY SIGNAL OUTAGE SHALL BE SCHEDULED DURING NON-PEAK HOURS AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL COORDINATE WITH SHA TRAFFIC OPERATION DIVISION TO CONTACT LOCAL POWER COMPANY TO SET-UP WORK WITH TO DISCONNECT THE EXISTING ELECTRICAL SERVICE AND HAVE THE NEW SERVICE ENERGIZED.

WIRING DIAGRAM
NOT TO SCALE



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 97 (GEORGIA AVENUE) AND I-495 INTERCHANGE
FOREST GLEN, MD

GENERAL INFORMATION PLAN

SCALE NONE DATE 3-21-13 CONTRACT NO. XY1515185

DESIGNED BY SJW COUNTY MONTGOMERY
DRAWN BY LEB LOGMILE 15009701.50
CHECKED BY AJM TMS NO. L803
FAP NO. TOD NO.

TS NO. 3638E-GH DRAWING SG-03 OF 03 SHEET NO. 3 OF 3

PLOTTED: WEDNESDAY, MARCH 27, 2013 AT 10:05 AM
FILE: Y:\12-0294-118 MD 97 SIGNAL MODS\5-MD 97 AT I-495 NB EXIT 31\PSG-P003.MD97014908.DGN

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